

Local Government

Projects Manual

Arizona Department of Transportation



INTRODUCTION

This manual is intended to assist local governments, Metropolitan Planning Organizations, Council of Governments, and consultants in the planning, programming, funding, scheduling, development, design, and construction of local government projects funded with Federal-aid. Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) policies, processes, and requirements that must be complied with are presented as well as available funding sources for local government projects.

Additional information is available on the ADOT web site and in, "A Guide to Federal-Aid Programs and Projects," Federal Highway Administration Office of Program Administration, Publication No. FHWA-IF-00-006, May 1999.

This manual is available on the ADOT Local Government website: <http://www.dot.state.az.us/ROADS/localgov/index.htm>. Questions regarding the information and suggestions for improvements to this manual should be directed to the ADOT Local Government Engineer.

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100 LOCAL GOVERNMENT PROJECT FUNDING SOURCES AND COSTS

It is the policy of the Arizona Department of Transportation to distribute and allocate Federal-aid funds between ADOT and local governments in a fair and equitable manner consistent with Federal laws, guidelines and regulations. Funding sources available to local jurisdictions, as well as anticipated project costs to local jurisdictions, are detailed in the following sections. MPO/COG internal distributions are consistent with Federal directives and guidelines. The COGs/MPOs are responsible for management of both the federal funding apportionments and the funding obligation authority in the execution of their program. Distribution of apportionments and obligation authority within each region is at the discretion of the respective MPO/COG. Funds are distributed to MPOs by formula.

ADOT may transfer apportionments among program categories if shown to be beneficial to the state in meeting the objectives of the state or local transportation plans. ADOT is limited in transferring funds based on the federal guidelines established by FHWA. FHWA's policy for the transfer of funds are outlined in the Federal-aid Highway Program Characteristics guidelines.

110 PLANNING AND PROGRAMMING

111 Multi-Year Transportation Improvement Program

MPOs and COGs develop a multi-year transportation improvement program (TIP) in cooperation with the regional transportation Technical Advisory Committee (TAC) and Executive Board or Administration Committees with approval by the Regional Council in consultation with the ADOT Transportation Planning Division.

Projects selected for inclusion in the TIP are of the same type historically allowed, e.g., reconstruction, new construction, widening, and resurfacing. The emphasis of the TIP shall remain on the completion of transportation capital improvement projects and not maintenance type activities.

112 Regional Transportation Policy Plan

MPOs and COGs develop and maintain a regional transportation policy plan to strengthen the planning process with local entities. The process includes development of policy guidelines to address regional planning goals and objectives, the project selection process based on the plan, the types of projects encouraged in the region, the funding and matching share requirements, and roadway functional classification definitions.

The regional planning process is overseen by the regional TAC, or a separate planning committee, and the policy plan adopted by the Regional Council or Executive Board. The planning process is identified as part of the long range transportation plan for the MPO planning area.

113 Regional System Plan

The regional system plan is used to identify the regional transportation system and the important elements of each mode, including intermodal connections within the region. If not addressed in the regional transportation policy plan, the regional system plan should identify minimum construction standards for projects.

During development of updates of the regional system plan, a review of the current FHWA functional classification system is conducted. Federal functional classification definitions are used in the development of the regional system plan to identify routes for federal-aid eligibility. Using the definitions established in the regional transportation policy plan, additional routes known as area roads of local importance are identified and evaluated with ADOT for federal-aid eligibility.

Maps are prepared which identify all off-state system federal-aid eligible routes with technical assistance of ADOT. The system plan is developed in coordination by the regional TAC, with approval by ADOT and the Regional Council or Executive Board.

120 SURFACE TRANSPORTATION PROGRAM (STP)

Surface Transportation Program (STP) funds are allocated by the federal government to the state for construction, reconstruction, rehabilitation, resurfacing, restoration and operation improvements. Ten percent (10%) of STP funds are set-a-side for safety construction activities related to hazard elimination and rail-highway crossings, ten percent (10%) is set-a-side for transportation enhancements, fifty percent (50%, which is equal to 62.5% of the remaining 80%) of STP funds are allocated to urbanized areas over 200,000 in population and remaining areas of the state, and the remaining thirty percent (30% which is equal to 37.5% of the remaining 80%) can be used in any area of the state.

STP apportionments are distributed to the Maricopa Association of Governments and the Pima Association of Governments on the basis of respective Phoenix and Tucson Urbanized Area populations.

Local government projects using STP funds must be located on a roadway that meets federal functional classification requirements and is included in an approved list of routes for the appropriate MPO/COG. Each MPO/COG has a list of approved roadways that are eligible for federal funds participation. STP funded local government projects are eligible for funding at 94.3% maximum federal share and 5.7% minimum local share. The STP funds can be used for qualified design and right-of-way as well as construction activities.

121 Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The Congestion Management System (CMS) is a federal requirement that is used in developing Transportation Improvement Programs (TIP). The CMS includes a qualitative policy element and a quantitative rating system for projects. The quantitative rating system includes factors related to congestion, multi-modal evaluation, land use considerations,

and cost effectiveness. Transportation projects that are included as part of and approved State Implementation Plan (SIP) or Non-attainment or Maintenance Area Plan must be given the highest priority for CMAQ funding. CMAQ projects are eligible for funding at 94.3% maximum federal share and 5.7% minimum local share. Currently 100 percent of CMAQ funds are allocated to MAG.

Projects must be in the approved State Transportation Improvement Program and include eligible activities such as:

- Transportation control measures to assist areas designated as nonattainment under the Clean Air Act Amendments of 1990,
- pedestrian/bicycles off-road or on-road facilities including modification of existing public walkways to comply with the Americans with disabilities Act,
- traffic management/monitoring/congestion relief strategies,
- transit,
- project development activities,
- and other transportation projects with air quality benefits.

Construction projects which add new capacity for single-occupancy vehicles do not qualify for CMAQ funding.

122 Highway Bridge Replacement and Rehabilitation Program (BR)

Highway Bridge Replacement and Rehabilitation Program (BR) funds are used for replacement of structurally deficient or functionally obsolete highway bridges or to rehabilitate the structural integrity of a bridge. An amount not less than 15% or greater than 35% of the total Bridge Replacement and Rehabilitation (BR) funds apportioned to Arizona are made available to local governments through a statewide “first come, first serve” basis each Federal fiscal year. The Bridge allocation does not carryover into the following fiscal year. ADOT Transportation Planning Division and ADOT Local Government Section should be contacted for availability of funds.

Any bridge in the State that is included in the Statewide Inventory of Bridges maintained by ADOT and is inspected on a regular interval either by ADOT or the local jurisdiction, and has a sufficiency rating below 50, is eligible for bridge replacement funds. Bridges with a sufficiency rating above 50 and below 80 qualify for bridge rehabilitation funds. Bridges with a sufficiency rating above 50 which are considered for replacement may be considered if the life-cycle analysis documents that it is more cost-effective to replace the bridge than rehabilitate it. Cost analysis for these bridges must be submitted to ADOT Local Government Section for approval. All projects should be selected in accordance with requirements described in ADOT’s Bridge Management Program. BR projects are eligible for funding at 80% maximum Federal share and 20% minimum local share. Funds are allocated to local jurisdictions on a “first come, first serve” basis. BR funds can be used for qualifying design and construction activities. A maximum federal participation of \$1,000,000 in BR funds is allowed per project.

Refer to section 400 of this manual for additional information on project eligibility and development.

123 Hazard Elimination System (HES)

Title 23, Section 152 and Section 133(d)(1) of the United States Code requires that 10% of funds apportioned to each State's Surface Transportation Program be set aside for safety improvements. In an effort to improve the safety of the entire surface transportation system, ADOT has set aside 25% of the safety funds for safety improvement projects on local government projects. These funds are available on a "first come, first serve" basis and do not carry over to subsequent years.

Approved safety improvement projects are eligible for funding at 94.3% maximum Federal safety funds and 5.7% minimum local funds. A maximum federal participation of \$500,000 in safety funds is allowed per project.

Additional information on safety funding eligibility and project development is provided in section 300 of this manual.

124 Railroad/Highway Grade Crossing (RR)

This federal program is available to improve highway safety at qualified public rail-highway grade crossing locations and is administered by the ADOT Utility & Railroad Engineering Section. Projects are funded 100% with federal funds through FHWA.

The ADOT's Traffic Engineering Section maintains a crossing survey which includes all public crossings. Each year representatives of the ADOT, the Arizona Corporation Commission (ACC) and the Federal Highway Administration (FHWA) select a group of crossings for field inspection, taking into account any recommendations from local government sponsors. A team consisting of representatives from the ADOT, the ACC, the FHWA, the railroad and the agency having jurisdiction over the road inspects each of the selected crossings and arrive at a consensus regarding improvements recommended for each crossing. The recommendations are compiled, and representatives of the ADOT, the ACC and the FHWA make a final selection of projects to be considered for the current Federal fiscal year, taking into account the amount of funds available. Utility and Railroad Engineering Section submits the projects for inclusion in the Statewide Transportation Improvement Program (STIP) to FHWA for approval.

Since the Average Daily Traffic count (ADT) is included in the crossing survey maintained by ADOT, it is important for local governments to keep Utility and Railroad Engineering Section apprised of changes in the current ADT for each crossing.

Local governments should submit a request to Utility and Railroad Engineering Section to initiate project development for a railroad crossing project. The Utility and Railroad Engineering Section will obtain a federal and ADOT TRACS project number for the project and monitor project development with the sponsoring agency and the railroad until the

project is ready for federal funds to be obligated. Additional information is available by contacting the to Utility and Railroad Engineering Section at 602-712-8694.

125 Transportation Enhancement (TEA)

Of the STP funds set aside for transportation enhancement projects, fifty percent (50%) is allocated to ADOT and fifty percent (50%) is allocated to local governments. Proposed enhancement projects are submitted for evaluation and selection annually. An enhancement project may be funded to a maximum of \$500,000.00 in federal enhancement funds.

Activities eligible for transportation enhancement funding include:

- PROVISION OF FACILITIES FOR PEDESTRIANS AND BICYCLES. This does not include typical construction elements of a roadway such as; travel lanes, traffic signals, etc.
- PROVISION OF SAFETY AND EDUCATIONAL ACTIVITIES FOR PEDESTRIANS AND BICYCLISTS. Activities must have a broad and preferably regional target audience.
- ACQUISITION OF SCENIC EASEMENTS OR HISTORIC SITES. The easements or sites must possess significant aesthetic natural, visual or open space values. Historic properties must be eligible or listed in the National Register of Historic Places)
- SCENIC OR HISTORIC HIGHWAY PROGRAMS (INCLUDING THE PROVISION OF TOURIST AND WELCOME CENTER FACILITIES). ADOT has in place a Parkways, Historic, and Scenic Roads Program. This program has a separate grant program for projects on those routes that have been designated by the State/ADOT. Any project under this activity must be on a State designated Scenic or Historic road.
- LANDSCAPING AND OTHER SCENIC BEAUTIFICATION. This is for primarily native and non-native plant landscaping activities. Site furniture such as benches, trash receptacles, etc. can be included. Stand-alone public art is not considered scenic beautification, however, some art can be included as part of a project but it is not eligible as a separate category under Transportation Enhancements. Public art has been included in the new Transit Enhancements funding program under the new TEA-21 legislation. Maintenance of landscaping does not qualify under this program.
- HISTORIC PRESERVATION. Any work under this category must have a strong transportation link either past, present or future.
- REHABILITATION OF HISTORIC TRANSPORTATION BUILDINGS, STRUCTURES, OR FACILITIES (INCLUDING HISTORIC RAILROAD FACILITIES AND CANALS).
- PRESERVATION OF ABANDONED RAILWAY CORRIDORS (INCLUDING THE CONVERSION AND USE THEREOF FOR PEDESTRIAN OR BICYCLE TRAILS).
- CONTROL AND REMOVAL OF OUTDOOR ADVERTISING.
- ARCHEOLOGICAL PLANNING AND RESEARCH.
- ENVIRONMENTAL MITIGATION TO ADDRESS WATER POLLUTION DUE TO HIGHWAY RUNOFF OR REDUCE VEHICLE-CAUSED WILDLIFE MORTALITY WHILE MAINTAINING HABITAT CONNECTIVITY.
- ESTABLISHMENT OF TRANSPORTATION MUSEUMS.

Additional information regarding eligibility, funding, and development of transportation enhancement projects is available from the ADOT Enhancement & Scenic Roads Section at 602-712-6258.

130 EMERGENCY RELIEF PROGRAM (ER)

Funding under this program has been established to aid Federal, State and local jurisdictions with unusually heavy expenses of repairing serious damage to Federal-aid roads resulting from natural disasters or catastrophic events from an external cause. The FHWA can provide up to \$100 million in ER funding for repairs to Federal highways and roads on Federal lands in a State for each natural disaster or catastrophic failure that is found eligible for funding under the ER program (commonly referred to as the \$100 million per State cap). For a large disaster that exceeds the \$100 million per State cap, Congress may pass special legislation lifting the cap for that disaster.

Eligible local government emergency repair work to restore essential travel, minimize the extent of damage, or protect the remaining facilities, accomplished in the first 180 days after the disaster occurs, may be reimbursed at 100 percent Federal share. During this 180-day period, permanent repair work is reimbursed at normal pro rata share unless it is performed as part of emergency repair work to restore essential travel, minimize the extent of damage, or protect remaining facilities.

In order for ER funds to be made available:

- A formal proclamation of the existence of a disaster must be made by the Governor,
- The President must make a formal declaration that a disaster has occurred, or
- The Governor must request that the President make such a decision.

If this proclamation/declaration requirement is satisfied, ADOT Local Government Section must then submit a request for FHWA to establish an ER project to cover the necessary repairs. This request needs to be supported by a brief report detailing the extent of the damage and a preliminary estimate of the cost of repairs, generally supported by Damage Survey Reports prepared by ADOT and FHWA staff. The total amount of damage must exceed \$500,000 for FHWA approval, unless there is very unusual and extenuating circumstances.

In general, the ER Program is intended to provide assistance when a State or local area has suffered widespread damage well beyond the capability of heavy maintenance and generally in excess of \$1 million. Normally, this would involve multiple sites instead of a single road or location.

Detailed eligibility information regarding ER funding for Federal-aid highways may be found in the publication titled "Emergency Relief Manual. Copies of this manual may be obtained from the FHWA Office of Program Administration (HIPA). Detailed information covering eligibility of repairs for roads on Federal lands may be found in the publication titled "Emergency Relief for Federally Owned Roads Disaster Assistance Manual". Copies

of this publication may be obtained from the FHWA Office of Program Development (HFPD).

140 HIGHWAY EXPANSION AND EXTENSION LOAN (HELP) PROGRAM

The Highway Expansion and Extension Loan Program (HELP) provides the state and its communities with an innovative financing mechanism to accelerate the funding of highway construction. This mechanism is referred to as a State Infrastructure Bank and was initially authorized by Congress in 1995. HELP was established and became effective August 21, 1998. HELP operates similar to a bank, providing financial assistance in the form of loans or credit enhancements for projects.

Applications for loans are accept by ADOT, reviewed, approved and awarded several times a year. Eligible borrowers include any political subdivision, the state or its agencies, and Indian Tribes.

Projects must be on the Federal-aid System, National Highway System, State Highway System, or designated as a state route. The project must be included in either the ADOT Highway Construction Program or in the Transportation Improvement Program (TIP) of a MPO/COG as described in A.R.S. 28-767 I (2).

All phases of construction projects (design, right-of-way, and construction) are eligible for financial assistance. The minimum amount of financial assistance that will be awarded is \$250,000.

Additional information is available on the ADOT web site or from the HELP Program at 602-712-8036.

150 HIGHWAY USER REVENUE FUND (HURF) EXCHANGE PROGRAM

The HURF Exchange Program became effective on October 1, 1997 and was extended to Maricopa and Pima counties during the FY 2000 Legislative session. The HURF Exchange Program allows the various COGs and MPOs to exchange a portion of their Federal-aid Highway funds to ADOT in exchange for HURF funds for eligible highway projects. The statutory reference for the exchange program:

ARS 28-6993-G "The department may exchange monies distributed to the state highway fund pursuant to section 28-6538, subsection A, paragraph 1 for local government surface transportation program federal monies sub-allocated to councils of government and metropolitan planning organizations if the local government scheduled to receive the federal monies concurs. An exchange of state highway fund monies pursuant to this subsection shall be in an amount that is at least equal to ninety percent of the federal obligation authority that exists in the project for which the exchange is proposed."

HURF exchange procedures are detailed in section 600 of this manual.

160 LOCAL JURISDICTION PROJECT COSTS

Local jurisdictions are responsible for partial funding and costs associated with Federal-aid funded projects. In addition to the local jurisdiction's share of design, right-of-way and construction costs, the local jurisdiction must transmit sufficient funds to ADOT prior to any ADOT activity on a local government project to cover the cost of ADOT technical review. ADOT can not charge any local government project time and costs to State budgets, consequently, the technical review costs must be recovered from the local jurisdiction. In 1991, the review cost was established at a minimum submittal of \$5,000; however, due to increases in review costs and more extensive review requirements, this "up front" cost has been increased to a minimum \$10,000. Some projects may require a larger amount. Unused monies is returned to the local jurisdiction at the conclusion of the project activity.

Local government projects administered under the Certification Acceptance program incur a lesser ADOT review cost and will require a deposit of \$3,000 per project.

When preparing project cost estimates and budgeting forecasts, local jurisdictions should add 15% costs to construction costs for construction administration and 5% for contingency to cover change orders during construction. These costs are eligible for federal reimbursement at the pro rata rate for the project type.

200 LOCAL GOVERNMENT PROJECT DEVELOPMENT PROCESS

This guide has been developed by the Arizona Department of Transportation (ADOT) to assist Metropolitan Planning Organizations (MPO), Councils of Government (COG), and sponsoring local agencies with developing, designing, funding, and administering local government projects that include Federal funds. Projects are processed and administered in accordance with established Federal Highway Administration (FHWA) and ADOT guidelines and requirements.

210 DESIGN CONSULTANT

If Federal funds are used for design costs and a design consultant is contracted, the local agency must have their consultant procurement process approved prior to negotiating a contract. Additionally, no work can be performed by the consultant until Federal funds for design have been authorized. The time required to obtain Federal obligation for design is dependent on the procurement process of the Local Agency.

Upon receipt of a request from a local agency to use Federal-aid money for design and approval to procure a design consultant, the Local Government Section will verify the project qualifies for design reimbursement. The project must be listed in the MPO/COG Transportation Improvement Program (TIP) and the State Transportation Improvement Program (STIP). The TIP should have a line item identifying funding for design or construction and design.

The ADOT Engineering Consultants Section (ECS) reviews and approves local agency design consultant procurement processes prior to the local agency advertising for a consultant. Typical procurement processes evaluated include:

- Pre-qualification – establish a mailing list of firms pre-qualified to perform professional engineering services required by the local agency.
- Approval to Advertise – obtain authorization to advertise from ADOT.
- Advertise – adhering to a process which provides for maximum free and open competition, two notices requesting submittal of proposal packets are published in a single newspaper or multiple newspapers of general circulation within the state and an accumulated general circulation of not less than 50,000 subscribers. The official notices are normally placed in the Legal Advertising section, not less than six nor more than ten calendar days apart.
- Request for Proposal (RFP) – Preparation of an RFP which includes the intent of advertisement, such as, request for preliminary engineering services, scope of work, statement of qualification (SOQ) due date, and number of copies required. If SOQ addendums are necessary, information must be provided to all firms that obtain a copy of the SOQ package. Acknowledgement of receipt must be included in proposal package. Evaluation criteria and weighting factors identified. Qualifications based

selection process does not allow costs as a factor. Oral interviews identified if applicable.

- Evaluation of Proposals – Prior to accepting a firm for consideration, the firm must comply with SOQ requirements. Proposals are to be evaluated by a panel of qualified members who are familiar with the project and intent of the contract. Evaluation should be based on proposal evaluation factors identified in the SOQ. Panel scores are compiled to arrive at average scores for each proposer. The highest ranked firm will be considered the most qualified. To be considered for selection, a firm must receive an overall ranking of 70% or above. Approval is obtained to begin negotiations with the most qualified firm. Verify that prime and sub-consultants are not currently debarred and/or suspended and excluded from participation in Federal programs. A reference website is www.epls.gov. If satisfactory contract negotiations are not reached, the agency may go to the next ranked firm.

Additional information may be obtained by contacting ECS at 602-712-7532

Following ADOT approval of the procurement process, a local agency advertises, selects a consultant, and negotiates fee. A copy of the executed contract with the design consultant should be submitted to the ADOT project manager. ADOT will then initiate an Intergovernmental Agreement (IGA) with the local agency for the reimbursement of Federal funds.

Once the Federal funds are authorized and the IGA executed, ADOT transmits a Notice to Proceed to the local agency. Federal funds can not be used for any work occurring prior to authorization to proceed.

220 LOCAL GOVERNMENT PROJECT MODEL (STP, CMAQ, BR, HES)

Local agencies are required to follow the ADOT project development process in the development and design of local government projects. The typical project will take 18 to 24 months to proceed through the process from the submittal of a design concept report to bid advertisement. The environmental determination can greatly impact the project schedule. Typical environmental determinations take 10 to 12 months from initial submittal to environmental clearance. Contact the Local Government Section for information regarding the project model and the scheduling process for various types of construction projects.

Requests for bridge funding should be prepared in accordance with section 400 of this manual. Bridge projects require the submittal of a Structure Selection Report, after the Design Concept Report has been approved.

Safety project requests for Hazard Elimination (HES) funds should be prepared in accordance with section 300 of this manual. Project requests will be reviewed and a determination made regarding HES funding eligibility prior to the submittal of a Design

Concept Report. HES projects must be shown as an approved project in the MPO/COG Transportation Improvement Program (TIP) and the Arizona Statewide Transportation Improvement Program (STIP).

230 PROJECT DEVELOPMENT MILESTONES

Each Metropolitan Planning Organization (MPO) and Council of Governments (COG) submits their Local Government Federal-aid Multi-Year Highway Construction Program to ADOT's Transportation Planning Division for inclusion in the Statewide Transportation Improvement Program (STIP). The goal of the STIP is for projects to be planned, programmed, and developed in accordance with federal-aid procedures and ADOT's Project Management and Scheduling process; federal-aid obligated; the project advertised for bid; and construction started in the fiscal year that the project is programmed. In order to accomplish this, the following tasks must be completed by the project sponsor.

231 Project Assessment

Projects are typically programmed in the fifth year of the Local Government Program. A project assessment including a detailed cost estimate and project schedule based on the Local Government Section model is to be prepared and submitted to the MPO or COG for prioritizing and programming. This activity is required to ensure that sufficient pre-engineering of the project is conducted to determine a reliable cost estimate for the project and a schedule is prepared that outlines project development in order to meet the local jurisdiction's desired construction start date.

232 Design Concept Report and Project Schedule

Prior to the preparation of a Design Concept Report, project sponsors should contact the ADOT Local Government Section and schedule a pre-design conference for a project. A project manager will be assigned to meet with the local agency and their design consultant to review the project scope, the schedule for the development of the project, the project budget and cost, and the design concept report guidelines for report format. All design concept reports must include a completed project schedule and detailed cost estimate based on the format provided at the pre-design conference.

ADOT uses the critical path method of scheduling for all highway construction projects. The Local Government project model was designed using a typical eighteen to twenty-four month project development duration. The total duration can be modified to meet the sponsor's needs for the type of project being developed.

As an example, projects that are predominately Intelligent Transportation System (ITS) improvements can be shortened with respect to the number of stage submittals if the project team concurs. However, all projects are required to follow the ADOT clearance process including environmental, utilities, and right-of-way processing requirements. As such, the project development will be a minimum 10 to 12 months, or as long as it takes to receive an environmental clearance.

When using the project model in determining a scheduled bid advertisement date for a project, it is advised to start with the construction start date that is anticipated and work backwards through the model to determine when project development should start to achieve a realistic project development schedule. The expected construction start date is approximately two and one half months after the bid advertisement date.

233 Project Design Review Costs

Local governments should execute an intergovernmental agreement with ADOT that outlines procedures for ADOT to recover the design review and bid package preparation costs incurred by ADOT to administer the development and advertisement for bid of local highway construction projects. ADOT has no financial involvement in any local government project and must recover its cost to administer local projects in accordance with federal requirements.

Local Government Section will request from Administrative Services Division, a federal-aid and TRACS project number after a pre-design conference has been held. A determination will be made by Local Government Section of the estimated design review and bid preparation costs for the project based on the detailed cost estimate provided in the design concept report. The project sponsor will receive a letter from Accounts Receivable Section of Administrative Services Division requesting that the sponsor send to ADOT the amount requested within 30 days. Based on review of historical costs to administer local government projects, a minimum of \$10,000.00 will be required for all projects. The estimated cost for any project will be determined using a design review cost estimate graph established from historical project data and may vary from what is shown on the graph based on the type and complexity of the proposed improvements for the project, right-of-way acquisition, utility relocation, environmental analysis requirements, and local agency and consultant experience with federal-aid procedures. Should project design review costs exceed the deposit during development of a project, Accounts Receivable Section will invoice the local agency for the estimated costs determined by Local Government Section to complete development of the project. At the conclusion of the preliminary engineering phase of the project, a final accounting of design review project costs will be made. The local agency will be informed by letter from Accounts Receivable Section of the final design review costs for the project. If any additional funds are required, a request for those funds will be included in the letter. Failure to provide ADOT with funds for technical review within 30 days, may jeopardize the continued development of a project.

234 Environmental Determination

All federal-aid projects require an environmental analysis and an Environmental Clearance certification. The project sponsor is responsible for obtaining all needed information and data, and preparing reports in accordance with ADOT format. The format and additional information is available on the ADOT website and in the appendix of this manual. The final Environmental Clearance will be issued by ADOT or FHWA. A letter identifying the type of environmental determination and information required for analysis will be sent by the Local Government Section NEPA Planner to the project sponsor. The analysis of information

provided by the project sponsor for projects that meet Categorical Exclusion requirements will be prepared by ADOT. All other environmental analysis work is the responsibility of the project sponsor. Preliminary engineering work can be completed through 30% project design, but Environmental Clearance must be obtained prior to final design work being started.

235 Reserved For Future Use

236 Stage Submittals

Requirements for the Stage II, III, IV, and PS&E project submittals are described in ADOT's Project Management Manual and are presented in the Appendix.

Include with the Stage II submittal, copies of letters sent to affected utility companies requesting the status of utility conflicts and a request for utility relocation schedule for ADOT review. If Right-of-Way acquisition is required, coordinate utility relocation work with the R/W process to ensure that the utility relocation work will not delay the project from advertising on schedule.

Submit the Right-of-Way Clearance request letter on the R/W Section form. R/W Clearance is required Whether or not right-of-way is being acquired. If federal funds are being used for design or right-of-way acquisition, right-of-way acquisition CANNOT be initiated until the Environmental Clearance has been obtained.

Project cost estimates are to be formatted using ADOT standard bid item numbers and quantities are to be listed according to the basis of payments criteria identified in the current ADOT Standard Specifications for Road and Bridge Construction. Should cost estimates exceed the budget for the project during project development, the local jurisdiction will be responsible for the additional cost. It is recommended that sponsors utilize ADOT construction standards and material specifications. These have been approved by FHWA for use on federal-aid projects. ADOT Standards can be used by reference in the project plans. Other construction standards can be used, but require ADOT review and approval and must have the details shown in the project plans. Materials specifications other than ADOT's must be modified from ADOT's Standard Specifications in the project Special Provisions. Format for reports, clearance letters, cost estimates, and Special Provisions can be obtained from Local Government Section. Construction plans shall be formatted in accordance with ADOT's drafting guidelines.

237 Final Plans Package

Special Provisions shall be prepared in accordance with ADOT format and submitted on a floppy disk or CD. Typically, the ADOT Contracts & Specifications Section will need at least one month to prepare a PS&E bid package. R/W Clearance and Utility Clearance

letters should also be submitted as part of the final plans package to ensure that the approval process will not delay bid advertisement.

238 Intergovernmental Agreement (IGA)

ADOT will prepare an Intergovernmental Agreement which outlines the financing for the project based on the cost estimate. The estimated project cost shown in the IGA includes a 15% estimate for the construction engineering cost and a 5% minimum contingency for change orders. ADOT will transmit the agreement to the project sponsor along with instructions for processing. The process requires City Council or Board of Supervisors action, agreement review and approval by sponsor's attorney, and the deposit of matching funds prior to the advertisement for bids. The execution of the intergovernmental agreement is a guarantee by the local government to provide local government matching funds for the project and to pay all project costs over the amount of federal-aid funds provided by the MPO or COG. The estimated project cost, federal-aid share, and local matching funds shown in the intergovernmental agreement are only estimates. The amount of federal-aid and local matching funds required to be provided for the financing of the project are listed on the project recapitulation sheet provided in the PS&E package plus a surcharge. The PS&E package will be sent by Contracts & Specification Section to the local jurisdiction for approval and authorization for ADOT to advertise the project for bid.

239 Plans, Specifications, & Estimate (PS&E) Package

Following revisions to project plans as requested by ADOT Contract & Specifications Section, the project sponsor will be sent final plans, specifications, and estimate for approval. A written response from the local agency to Contracts & Specifications Section is required authorizing ADOT to advertise on the sponsor's behalf. Approval of PS&E package and authorization to advertise is an agreement to provide local matching funds shown in the project estimate recapitulation sheet. MPO/COG concurrence to provide federal-aid funds for construction and change order costs for the project will be required prior to the project being advertised for bid. Earthwork computations, mass curve, and plotted cross-sections are required, if applicable.

240 LOCAL AGENCY MATCHING FUNDS

The matching funds required for a local government project will be the amount shown on the project estimate recapitulation sheet provided by Contracts & Specifications Section in the project PS&E bid package plus a surcharge amount.

241 Change Orders

ADOT will continue to require that a contingency for additional construction funds be provided. The contingency will be based on a 5% minimum surcharge of the project estimate. The percentage used is based on the estimated total construction cost of the project and will be used to cover the estimated cost of change-orders or force account work that may be required during construction. The project sponsor will be required to

provide 100% of the estimated percentage of change order costs when a MPO or COG does not provide federal-aid funds for change orders. Matching funds must be submitted prior to the project being advertised for bid. It is recommended that the MPO's and COG's program a 5% change order percentage amount for all local government projects for federal-aid cash flow purposes.

242 Project Bid Advertisement and Award

Projects will be advertised for bid when Environmental Clearance, R/W and Utility Clearance are approved, PS&E package is approved, the IGA has been executed and matching funds have been provided. Projects are advertised, bids opened, bids reviewed and certified, and awarded by the State Transportation Board. This process requires a minimum of 2 1/2 months.

If the low bid is at or below the ADOT estimate, a recommendation will be made to the Transportation Board for award. A written response from the local agency of concurrence is required.

Should the low bid be in excess of the ADOT estimate, ADOT will contact the project sponsor and the MPO/COG to inform both parties of the bid results and the difference in project cost between the low bid and the ADOT estimate. The local agency and MPO/COG must determine a source of additional funds prior to the project being recommended for award. Additional matching funds provided by the local government must be submitted to ADOT within 30 days. A written response by the local government for concurrence of award will be requested by Contracts and Specifications Section. Should additional federal funds and/or local agency matching funds not be provided, the project will be returned to the project sponsor to be revised in accordance with Federal-aid Program procedures and the MPO/COG approved federal-aid and local government funding limits, and a schedule for a new bid advertisement will be made by Contracts & Specifications Section. It is recommended that the MPO/COG program a bid overrun percentage amount (from 5% to 10%) for all local government projects for federal-aid cash flow purposes, to minimize any delay in the award of a local government project when bids exceed Contracts & Specifications Section's estimate.

243 Project Construction and Post Design Services

The local agency/project sponsor is responsible for post-design work that may be required during the construction phase of the project. Should there be questions by the contractor or ADOT regarding design errors, omission of design information on the plans, or suggestions for design changes, the engineering designer (or consultant firm) must be available to respond to these inquiries. ADOT engineers do not affix their professional engineering seal to the plans or specifications for any local government project, and cannot make any design changes for the project. The engineering designer (or consultant firm) must answer all design inquiries and prepare any design changes to their engineering drawings and specifications. This information must be provided to the engineering designer (or consultant firm) when they are retained to start project development.

244 Final Project Cost Accounting

At the conclusion of the construction phase of the project, a final accounting of project costs will be made. The project sponsor will be informed by letter from Accounts Receivable Section, of the final construction costs for the project. Should any additional funds be required, a request for those funds within 30 days will be included in the letter. All funds provided by the project sponsor in excess of the amount needed to reimburse ADOT for design review costs and to pay all construction costs will be returned within 30 days, or can be applied to another project, or held on account for a future project. Future construction projects will not be advertised for bid until reimbursement is made to ADOT for past project construction costs.

250 PROJECT DEVELOPMENT CHECKLIST

The following steps summarize the procedure to be used for processing federally funded local government STP, CMAQ, BR, RR, and HES projects. ADOT's role is to assist the local agencies through the project development process and insure compliance with ADOT/FHWA policies, regulations, and guidelines. ADOT will also administer the construction phase of most local government projects. The typical project will take 18-24 months from inception to advertisement.

1. Project sponsor contacts their local Council of Government/Metropolitan Planning Organization (COG/MPO) to include the project in the appropriate five year transportation improvement program (TIP).
 - Project must be in the TIP/STIP to qualify for Federal funding and the local government process.
 - Federal-aid projects are to meet functional classifications.
2. Project sponsor submits a letter to the ADOT Local Government Engineer requesting project number and providing brief detail of project scope, location, cost, schedule, and COG/MPO TIP identification number.
3. If Safety or Bridge Rehabilitation/Replacement funded, appropriate project eligibility report must be prepared and submitted to ADOT for approval of funding.
4. A Local Government Section project manager is assigned the project, requests project and TRACS numbers from ADOT, and notifies local agency.
5. Local agency deposits ADOT review fee (typically \$10,000.00) to ADOT.
6. Local agency arranges a kick-off meeting with sponsor, design consultants, ADOT and COG/MPO.
7. If Federal funds are being used for design, follow ADOT/FHWA consultant procurement guidelines.

8. Budget 15% construction engineering and 5% contingency funds if ADOT is performing construction administration of the project.
9. Local agency submits Initial Design Concept Report (DCR) to ADOT Local Government Section (LGS). The DCR should include a realistic scope, bid date, and cost estimate.
10. ADOT reviews DCR and sends comments to Sponsor.
11. Sponsor submits final DCR to ADOT Local Government Section.
12. Local Government Section approves DCR and notifies Sponsor.
13. Sponsor submits Initial Environmental Report to ADOT Local Government Section.
 - Pigmy owl situation clearance takes at least 12 to 18 months.
 - 404 and 401 permits from US Army Corps take at least 12 months. Have a definite window for construction activities.
14. ADOT Local Government Section Environmental Planner reviews environmental determination report and provides comments to Sponsor.
15. Local agency submits Final Environmental Determination Report to ADOT Local Government Section.
16. Environmental clearance is obtained from ADOT or FHWA through the Local Government Section Environmental Planner. NEPA and FHWA guidelines must be satisfied.
17. Sponsor submits Preliminary Plans (30% stage), preliminary cost estimate, and reports to ADOT Local Government Section. Required reports depend on the project type and may include drainage report, geotechnical report, pavement design summary, materials memo, structure selection report, etc. **Do not proceed beyond 30% design without an environmental clearance if Federal funds are used for design.**
18. ADOT 30% review comments are transmitted to the sponsor who should resolve at an early stage.
 - Any design exceptions? If so, get approval, but try to avoid design exceptions.
19. Sponsor submits 60% plans, specifications, and estimate to ADOT Local Government Section.
20. Sponsor submits initial/final materials memo, geotechnical report, pavement design summary, drainage report, and bridge selection report.

21. If necessary, arrange a field review meeting with ADOT district staff, local agency, and design team to resolve ADOT review comments.
22. Sponsor Initiates the Utility clearance letters.
23. Sponsor initiates the Right of Way clearance letters.
24. ADOT Local Government Section project manager initiates an IGA (Intergovernmental Agreement) between ADOT & local sponsor. Allow 6 months to obtain signatures from all parties and process the paperwork.
25. Sponsor submits 95% PS&E package to ADOT. ADOT conducts final review.
 - All ADOT review comments to be resolved before submitting 95% PS&E and all final reports to be approved by ADOT
 - Include in the PS&E package landscaping plans, seed specs, and NPDES requirements if necessary.
26. Sponsor submits Final Plans (100% complete), final cost estimate, and bidding schedule to ADOT.
27. Verify Earthwork calculations (quantity check) to avoid change orders in the field.
28. Need local funds from sponsor based on final cost estimate. Include 5% surcharge (contingency) if construction administered by ADOT for change orders.
29. If federal funds are not adequate to meet the final cost estimate based on project scope, revise the scope to fit the budget or sponsor to pay the balance to ADOT.
30. Final PS&E approval from sponsor.
31. ADOT obtains obligation authority of Federal funds from FHWA subsequent to final PS&E and clearances.
32. Allow ADOT Contracts & Specifications Section at least 2 months to advertise the project. DBE requirements, Davis Bacon wages, training, etc. must be satisfied.
33. Sponsor to submit all original drawings when requested from ADOT.
34. Bid Opening (allow 22 working days from the date job advertised).
35. ADOT Board to award a contract to low bidder(next available Board date after bid opening).
36. See prospective contractor within 2-4 weeks.
37. ADOT arranges a partnering workshop if ADOT is administering construction.

38. Construction begins.

NOTES

- A major task is the preparation of a realistic schedule and meeting allocated budget with a defined scope (DCR).
- Check quantities twice.
- Prepare plans, specifications and estimate with utmost care. Missing details and notes are potential change orders for the contractor.
- Prepare plans that are legible without too much information on a sheet.
- Prorate total project costs at appropriate FHWA and sponsor rates.
- Add 5% surcharge for change order possibility.
- Add 15% for ADOT CE costs (Construction Engineering).
- Any project cost in excess of amount allocated by the COG must be sponsor responsibility.
- Have all clearance and permits on hand during construction.
- Constant coordination and communication is the key to meeting deadlines.



300 ADOT Hazard Elimination System (HES) Program

This guide has been developed by the Arizona Department of Transportation (ADOT) to assist Metropolitan Planning Organizations and Councils of Government (COG) and their sponsoring agencies with developing high accident location safety improvement projects in conformance with the Federal-Aid Hazard Elimination Program (HES) and ADOT's Action Plan. The objective of the ADOT HES program is to reduce the number and severity of crashes and decrease the potential for crashes on state highways and qualifying local roadways.

Projects under this program are developed in a manner similar to other Federal-Aid highway projects. However, proposed projects will not be approved for Federal-Aid funding until they are evaluated by ADOT and the Federal Highway Administration (FHWA) and found to meet eligibility criteria. The project development and design process will normally take 18 to 24 months to process from Design Concept Report submittal to bid advertisement.

Any reports, lists or data used for the development of safety projects under this program are not subject to discovery or admittance into evidence in court proceedings per US Code: Title 23, Section 409.

310 FUNDING

Title 23, Section 152 and Section 133(d)(1) of the United States Code requires that ten percent of funds apportioned to each State's Surface Transportation Program must be set aside for safety improvements (\$11,146,000 was set aside for safety improvement projects in the 1999 Federal fiscal year). Of that ten percent, the State is required to set aside an amount not less than the 1991 Federal fiscal year apportionment to the Highway-Rail Crossings Program (\$1,576,000) and the Hazard Elimination Program (\$2,025,000). ADOT, under its own discretion, may allocate the remaining safety improvement funds to either program and has opted to allocate them to the HES.

In an effort to improve the safety of the entire surface transportation system, ADOT has set aside 25 percent of the HES funds for safety improvement projects on local government projects. These funds will be available on a "first come, first served" basis and will only be available for that fiscal year. In fiscal year 2002, \$1,682,000 was available in obligation authority for local government safety projects.

Approved safety improvement projects will be funded at 94.3 percent Federal HES funds, and the remaining 5.7 percent funded by the project sponsor. A maximum participation of \$500,000 in HES funds is allowed per project.

Approved safety improvement projects may also be approved for consolidation with overlapping, abutting, and nearby projects. Under this scenario the projects can be developed independently, and will normally be combined and bid and constructed under a single construction contract. The safety improvement project will be funded with HES



funds at the 94.3/5.7 percent participation rate, and the overlapping, abutting, or nearby highway project will be funded under the appropriate participation rates.

320 IMPROVEMENTS ELIGIBLE FOR HES FUNDS

Virtually any type of public surface transportation facility improvement, including bicycle and pedestrian facilities, may be approved for Federal-Aid funding provided that the sole purpose of the improvement is to eliminate traffic hazards or to substantially improve safety. While highway, intersection, and drainage capacity enhancement may be a by-product of the safety improvement, improvements primarily intending to enhance such capacity with safety as a by-product will not be approved. Typical examples of eligible safety improvements are as follows:

- Signing
- Pavement markings, including raised reflectorized pavement markers
- Delineation, including hazard markers
- Channelization
- Horizontal and vertical curve flattening
- Shoulder widening on horizontal curves
- Addition of paved shoulders
- Roadway realignment
- Roadway widening to provide channelization, including two-way left-turn lanes
- Travel lane widening
- Box and pipe culvert extension
- Minor bridge replacement (The Bridge Replacement Program should be considered for this item)
- Sideslope flattening
- Guardrail, including end treatments
- Impact attenuators
- Intersection and section illumination
- Traffic signals and traffic signal upgrades
- Livestock and wild game fencing
- Cattleguards associated with fencing
- Removal of sign obstructions
- Removal of fixed objects
- Bridge approaches
- Design
- Right of Way
- Utility Relocation
- Longitudinal rumble strips
- Emergency Vehicle Preemption
- Traffic calming



321 Non-Eligible Improvements

The following improvements are not eligible for HES funding:

- Any safety improvement on a non-public surface transportation facility
- Any improvement principally intending to enhance highway, intersection, or drainage capacity
- Any Railroad-Highway grade crossing improvements, contact ADOT's Utility and Railroads Section for funding requirements
- Most bridge replacements, contact ADOT's Local Government Section for funding requirements

330 ESTABLISHING PROJECT ELIGIBILITY

It is the intent of the Hazard Elimination Program to:

- (a) identify existing and/or potential high accident locations on all public surface transportation facilities
- (b) to prioritize those locations
- (c) to evaluate and systematically improve traffic safety at those locations by rational and economic means, and
- (d) to evaluate the effectiveness of safety improvements.

In determining eligibility of safety improvement projects for HES funds, ADOT and FHWA will evaluate projects with respect to the following:

- The proposed project must be located on a public surface transportation facility.
- The project proposal should indicate that the project location was identified on the basis of an evaluation of traffic accident experience/potential system wide.
- Multiple project requests should be ranked on the basis of benefit/cost (B/C) ratio (preferred) or traffic accident rate.
- Federal-Aid funding for each project must not exceed \$500,000 without ADOT approval.
- The project proposal should be in the form of a traffic accident and safety improvement analysis. If in the form of a Design Concept Report, the proposed project should address project justification in terms of traffic engineering practices.
- The project proposal should address:
 - a) Specific project location.
 - b) Existing surface transportation facility culture and conditions.
 - c) Traffic accident experience, including locations, patterns and severity for at least the most recent three (3) year period. A Collision Diagram should be provided. Where accident potential is considered over accident experience, justification should be presented on the rationale of the proposed project over other projects with accident experience.
 - d) Current traffic volume/turning movements on all approaches to the project location.
 - e) Safety improvement strategy.



- f) Estimate of expected public benefits, incorporating accident reduction factors.
- g) Estimate of improvement costs.
- h) B/C ratio.
- The project proposal should be economically sound with a B/C ratio of at least 1.00.

340 PROJECT DEVELOPMENT

This section lists milestones in the project selection and development process.

1. Survey jurisdictional surface transportation facilities with respect to physical features, usage conditions, and traffic accident experience/potential.
2. Conduct traffic engineering accident, improvement, and economic analyses at high accident and potentially high accident/high severity locations.
3. Select and rank improvement projects by B/C ratio (preferred) or traffic accident rate.
4. Prepare project proposals, including multi-year proposals in traffic engineering studies format or Design Concept Report format and submit to ADOT Local Government Section for eligibility determination.
5. Submit approved project to MPO/COG for programming in the 5-Year Transportation Improvement Program. When project estimates exceed the annual allocation of HES funds, ADOT will rank projects for programming.
6. Sponsor deposits a technical review fee with ADOT. The fee is typically \$10,000.00 and covers the required technical reviews by ADOT staff and supplemental services personnel.
7. Submit Design Concept Report to ADOT Local Government Section.
8. Project development and design proceeds to construction in accordance with activities described in Section 200 of this manual and the ADOT Action Plan.
9. After projects are constructed, one (1) year and two (2) year "Before and After" traffic engineering accident analyses must be prepared to illustrate improvement effectiveness and to meet Federal program requirements. The one and two year analyses should be forwarded to ADOT Local Government Section. The results of these analyses are incorporated in an annual report to FHWA on the effectiveness of the Statewide Highway Safety Improvement Program.

341 Accident Data

Traffic accident data is the principle input to traffic safety evaluations. Jurisdiction wide data may be obtained from local police agency files or from ADOT's Traffic Records



Section in various formats. Electronic data is also available in a variety of formats from ADOT. Jim Williams, ADOT Traffic Records Manager, can be contacted at 602-712-7132 for available data.

For most Arizona agencies, an annual or multi-year accident spot map is an excellent method for locating accidents and identifying locations for evaluation. For large agencies, computer analysis may be necessary to identify such locations. No specific method of identifying locations is required, and any method used should be based on agency needs and capabilities, and complexity of their safety improvement program.

342 Project Proposals

A specific format for project proposals is not required. However, the project justification should provide sufficient detail to enable the reviewers to clearly understand the rationale of project selection and the relationships between the existing roadway environment, traffic accident experience/potential, proposed safety improvement, and economic effects. The Manual of Traffic Engineering Studies published by the Institute of Transportation Engineers may be used as a guide.

Accident reduction factors for typical safety improvements are available from Reed Henry, ADOT Traffic Engineering Group, at 602-712-7374.

Traffic accident cost information which may be used in benefit/cost analyses is available from the ADOT HES Section, 2828 North Central Avenue, Suite 900, Maildrop 065R, Phoenix, Arizona 85004, or by phone (602) 712-8873. These costs are periodically adjusted to reflect statewide accident experience. Current accident cost information is available.

An example of the benefit/cost analysis is presented on the ADOT Traffic Engineering Group website, www.dot.state.az.us/ROADS/traffic/pgp.htm.

For additional information, please contact Randy Allenstein, ADOT Local Government Engineer at 602-712-7109 or e-mail at rallenstein@dot.state.az.us.

REFERENCES

A Guide to Federal-Aid Programs and Projects, May 1999, published by FHWA, Publication No. FHWA-IF-99-006.

400 HIGHWAY BRIDGE REPLACEMENT AND REHABILITATION PROJECTS

This procedure applies to all bridge projects using Federal bridge (BR) funds. The local jurisdiction is responsible for shared funding of design and construction costs when applicable; environmental, utility, and right-of-way clearances; and design. ADOT's role is to manage project development in accordance with ADOT/FHWA guidelines and administer the construction phase if applicable. The development and design process will take a minimum of 18 to 24 months to process from Design Concept Report submittal to bid advertisement.

410 ELIGIBILITY (23 U.S.C. 144, 23 CFR 650D)

Federal bridge funds may be used for:

- The total replacement of a structurally deficient or functionally obsolete highway bridge on any public road with a new facility constructed in the same general traffic corridor,
- The rehabilitation that is required to restore the structural integrity of a bridge on any public road, as well as the rehabilitation work necessary to correct major safety (functional) defects,
- The replacement of ferryboat operations in existence on January 1, 1984, the replacement of bridges destroyed before 1965, low-water crossings, and bridges made obsolete by Corps of Engineers (COE) flood control or channelization projects and not rebuilt with COE funds, and
- Bridge painting, seismic retrofitting, calcium magnesium acetate applications, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and de-icing compositions or installing scour countermeasures.

Deficient highway bridges eligible for replacement or rehabilitation must be over waterways, other topographical barriers, other highways, or railroads. They must, however, as determined by the State and the Secretary of Transportation, be significantly important and unsafe because of structural deficiencies, physical deterioration, or functional obsolescence.

To qualify for funds, a bridge must be included in the ADOT Statewide Inventory of Bridges and be inspected on a regular interval either by ADOT or the local jurisdiction. Bridges with a sufficiency rating below 50 and structurally deficient or functionally obsolete are considered for replacement funds. Bridges with a sufficiency rating between 50 and 80 are eligible for rehabilitation funds. Replacement of bridges rated greater than 50 may be eligible if rehabilitation alternatives are not feasible and/or rehabilitation would not remove all the deficiencies.

420 FUNDING



Eligible bridge project costs are funded at 80% Federal share and 20% local share. The maximum Federal funds are capped at \$1,000,000.00 per bridge. Eligibility and funding are determined by the ADOT Local Government Section.

430 PROJECT DEVELOPMENT

This section lists milestones in the project development and design process.

1. Sponsor submits a report to the Local Government Section requesting consideration for Bridge funding. The report should include the Statewide Bridge Inventory Identification Number, sufficiency rating (current bridge inspection report), and justification for funding.
 2. ADOT Local Government Section coordinates evaluation of bridge project by reviewers and determines eligibility.
 3. Sponsor contacts MPO/COG to initiate the project in five year transportation improvement program (TIP). Project must be in the MPO/COG TIP and State TIP to qualify for Federal funding.
 4. If Federal funds are being used for design, follow ADOT/FHWA guidelines to obtain contract with design consultant. An IGA between ADOT and the local agency must be executed prior to Federal funds being used.
 5. Sponsor deposits a technical review fee with ADOT. The fee is typically \$10,000.00 and covers the required technical reviews by ADOT staff and supplemental services personnel.
 6. Sponsor submits Initial Design Concept Report (DCR) to ADOT Local Government Section (LGS). The DCR should include a realistic scope, bid date, and cost estimate. The cost estimate should include 15% for construction administration and 5% for contingency costs.
 7. Project development and design proceeds to construction in accordance with activities described in Section 200 of this manual.
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SECTION 500 CERTIFICATION ACCEPTANCE PROGRAM

ADOT, with FHWA review and approval, may delegate to local governments the authority to self-administer projects under the certification acceptance program. If approved, a local government is granted authority to design, advertise and award, and administer construction of local projects. ADOT will review and approve the project design concept report, review the environmental determination, provide environmental clearance, and process Federal funds authorization.

510 CERTIFICATION ACCEPTANCE APPLICATION PROCEDURE

The following is a brief summary of steps performed in approving a local agency for the certification/acceptance program. These steps are by no means all inclusive of the process.

1. Local agency submits a formal request to the ADOT Local Government Section to initiate process of evaluating the local agency's qualifications for approval to self-certify and accept their construction projects. The Local Government Section coordinates review and approval of the local agency's program.
2. The local agency is provided information regarding certification acceptance requirements.
3. The local agency and appropriate ADOT District office coordinate ADOT's oversight and evaluation of the local agency's administration of one or more construction projects.
4. The local agency submits their documented certification acceptance process to ADOT for review. The local agency's process must demonstrate a thorough understanding of ADOT and FHWA processes, policies, and specifications.
5. Designated areas of ADOT, such as, Engineering Consultant Services, Contracts and Specifications, Roadway Design, Civil Rights Office, Construction Operations, and the District, as well as the FHWA, review the documentation and meet with the local agency to evaluate their processes. Typical items reviewed are the local agency's organization, standards and procedures, regulations, applicable laws, and past performance.
6. Following resolution of comments and approval of final documentation, the ADOT Director and local agency authority sign an approved procedures document.
7. A workshop is held with ADOT, the local agency, and FHWA to facilitate implementation of the local agency's procedures and adherence to requirements.

ADOT is obligated to conduct this process in accordance with the “ADOT-FHWA Operating Partnership,” which details responsibilities and requirements. A periodic review of the local agency’s operation and administration of projects should be conducted at least once every four years according to the partnership agreement.

511 Items Reviewed for Qualification

| <u>ITEM</u> | <u>REVIEW REQUIREMENTS</u> |
|--|---|
| <ul style="list-style-type: none">• DESIGN & DEVELOPMENT<ul style="list-style-type: none">a) Project Scoping andb) Design Exceptions/Variances <i>ADOT Contact:</i> <i>Tim Wilson, Roadway Predesign</i> <i>(602) 712-6962</i>c) Standards <i>ADOT Contact:</i> <i>Bill Lyons, Roadway Design</i> <i>(602) 712-7082</i>d) Specifications <i>ADOT Contact:</i> <i>Barry Crockett, Contracts & Specifications</i> <i>602-712-7221</i> | <p>Procedures used for project development</p> <p>Procedures for approval of design exceptions as part of Project Scoping.</p> <p>Design & Construction standards.</p> <p>Project administration and materials specifications (PS&E).</p> |
| <ul style="list-style-type: none">• ENVIRONMENTAL APPROVAL <i>ADOT Contact:</i> <i>Alisa Sauvageot, Local Government Section</i> <i>602-712-7137</i> | <p>Use ADOT/FHWA process.</p> |
| <ul style="list-style-type: none">• RIGHT-OF-WAY ACQUISITION<ul style="list-style-type: none">a) R/W clearance and certification <i>ADOT Contact:</i> <i>Louis Malloque, R/W Project Management</i> <i>602-712-8755</i> | <p>Response to FHWA 34 point questionnaire.</p> |

- UTILITIES & RAILROADS

- a) Utility clearance certification

Procedures for prior rights determination.
Procedures for federal-aid reimbursement of utility relocation costs.
Procedures for project agreements with the RR for railroad projects improved as part of a highway construction project.

- b) Railroad/Highway Grade crossing
ADOT Contact:
Bruce Vana, P.E., Utility/RR Section
602-712-8681

- PROCUREMENT

- a) Procurement of Consultants

Procurement procedures.

- ADOT Contact:*

- Carrie Satterlee, Engineering Consultants Services*
(602) 712-7532

- b) Procurement of contractors

Procurement code and procedures for construction projects.
Complete bid package.

- ADOT Contact:*

- Barry Crockett, Contracts & Specs*
602-712-7221

- c) Equipment Procurement

Equipment procurement code and procedures

- ADOT Contact:*

- Terri Johnson, Procurement*
(602)-712-8364

- CIVIL RIGHTS

- a) DBE requirements for procurement of Consultants

Procedures for establishing percentages.

- b) DBE requirements for construction projects

Procedures for establishing percentages
10% Goal for all projects.

- ADOT Contact:*

- Lisa Wormington, Civil Rights Office*
602-712-7761

- CONSTRUCTION ADMINISTRATION

- a) Construction Inspection

Procedures for items a – f.

- b) Materials Testing

- c) Quality Assurance, Independent testing, frequencies

- d) Project Final Acceptance

- e) Labor Compliance

- f) Resolution of Claims

- ADOT Contacts:*

- Allan Samuels, Construction Operations Section*
602-712-8940

- Appropriate ADOT District Office*

- **INTERNAL AUDIT PROCEDURES**
ADOT Contact:
Vernon Knapp, Audit & Analysis
602-712-7881
- **ADMINISTRATIVE PROCEDURES**
 - a) FHWA Authorization of Federal-aid Funds
 - b) Reimbursement of contractor payments and other eligible federal-aid costs.
 - c) Records Retention
 - d) ADOT Process Review*ADOT Contact:*
Randy Allenstein, Local Government Section
602-712-8107

Approval of the single audit process by ADOT.

ADOT will provide the procedures, and the format for all administrative procedures.

Nate Banks, FHWA, (602) 379-3646, is involved in all of the activities of the Certification Acceptance process.

520 CERTIFICATION ACCEPTANCE PROCESS AND ADMINISTRATIVE PROCEDURES

521 Request for Federal and TRACS Project Numbers

ADOT provides federal-aid and TRACS project numbers for all federal-aid design, R/W, utility, and construction projects. Requests for project numbers are submitted by the local agency to the ADOT Local Government Section, and should be requested prior to the start of the project development process. Include with the request, the project location, termini, project length, project cost including construction engineering, the expected bid advertisement date, a copy of the approved MPO or COG federal-aid program project budget, and the MPO or COG policy regarding federal-aid participation in change orders. A separate line item for federal-aid design, utility, and R/W projects should be shown in the MPO or COG Transportation Improvement Program (TIP). Approximately two weeks are required for project numbers to be assigned and transmitted to the local agency. Project folders will contain comprehensive documentation of the project development and construction administration process including all approvals given.

521.1 Safety Projects

To qualify for Federal-aid safety funds, a project eligibility request must be submitted to ADOT Local Government Section. Local Government Section and FHWA staff review the request and make a determination if the project is eligible for federal safety funds. The notice of project funding eligibility will be sent to the project sponsor by Local Government Section. It is recommended that project eligibility be determined prior to the inclusion of the project in the 5 year local government highway construction program. Once a project

is approved and a request for a federal-aid and TRACS project numbers has been obtained, a firm bid advertisement date should be provided. ADOT manages safety projects on a first-come basis and must manage the project financing and obligation of funds for projects with other safety projects scheduled statewide in accordance with the program funding limits established by ADOT. Any conflict with the expected bid advertisement date for a project and other projects in the Local Government 24 Month Schedule will be discussed with the project sponsor. See section 300 of this manual for additional information regarding safety funds.

521.2 Bridge Replacement/Rehabilitation Projects

To qualify for Federal-aid bridge replacement and rehabilitation funds, a project eligibility request must be submitted to ADOT Local Government Section. Local Government Section and FHWA staff review the request and make a determination if the project is eligible for federal bridge replacement or rehabilitation funds. A notice of project funding eligibility will be sent to the project sponsor by Local Government Section. It is recommended that project eligibility be determined prior to the inclusion of the project in the 5 year local government highway construction program. Once a project is approved and a request for a federal-aid and TRACS project numbers have been obtained, a firm bid advertisement date shall be provided. ADOT manages bridge funds on a first-come basis and must manage the project financing and obligation of funds for bridge projects scheduled statewide in accordance with the program funding limits established by ADOT. Any conflict with the expected bid advertisement date a project and other projects in the Local Government 24 Month Schedule will be discussed with the project sponsor. See section 400 of this manual for additional information.

522 Environmental Determination and Clearance Process

All federal-aid projects require an environmental analysis and an Environmental Clearance certification. The project sponsor is responsible for obtaining all needed information and data, and preparing reports in accordance with ADOT format. The format and additional information is available in Appendix C of this manual and on the ADOT website. The final Environmental Clearance will be issued by ADOT or FHWA. A letter identifying the type of environmental determination and information required for analysis will be sent by the Local Government Section NEPA Planner to the project sponsor. The analysis of information provided by the project sponsor for projects that meet Categorical Exclusion requirements will be prepared by ADOT. All other environmental analysis work is the responsibility of the project sponsor. If Federal funds are used for design, final design (design beyond 30% plans) and right-of-way negotiation cannot be initiated until environmental clearance has been obtained.

523 Design Projects

All requests for authorization of federal-aid funds for project design costs are submitted to ADOT Local Government Section. Design projects may require two authorization requests; one for preliminary engineering design and one for final design. Included with

the request is the cost for the preliminary (up to 30% design stage) and final design work, the federal-aid pro-rata share, and the local matching share of the project cost. ADOT will request authorization of federal-aid funds on the local agency's behalf and will transmit a copy of FHWA authorization to the local agency. Costs incurred prior to FHWA authorization are not eligible for federal-aid reimbursement. Design can not proceed beyond the 30% stage without environmental clearance if Federal funds are used for design.

524 Utility Relocation Costs

All requests for authorization of federal-aid funds for utility preliminary engineering and relocation costs is submitted to ADOT Utilities and Railroad Section. Included with the request is the cost for the utility preliminary engineering and relocation work, the federal-aid pro-rata share, and the local matching share of the project cost. ADOT will request authorization of federal-aid funds on the local agency's behalf and will transmit a copy of FHWA authorization to the local agency. Costs incurred prior to FHWA authorization are not eligible for federal-aid reimbursement.

525 Right-of-Way Acquisitions Costs

All requests for authorization of federal-aid funds for R/W acquisition costs are submitted to the ADOT R/W Public Liaison Section. Included with the request is the cost for the right-of-way acquisition work, the federal-aid pro-rata share, and the local matching share of the project cost. ADOT will request authorization of federal-aid funds on the local agency's behalf and will transmit a copy of FHWA authorization to the local agency. Costs incurred prior to FHWA authorization are not eligible for federal-aid reimbursement.

526 Project Agreements and Requests for Reimbursement of Design, R/W, and Utility Costs

ADOT will execute a project agreement with FHWA for design, R/W, and utility relocation project costs on the local jurisdiction's behalf. A copy of the project agreement will be transmitted to the local jurisdiction. All requests for reimbursement of design, R/W, and utility relocation payments and other eligible federal-aid costs are submitted to ADOT Accounts Receivable Section, Administrative Services Division. Requests should be prepared using ADOT's payment forms. Requests for reimbursement can be made once monthly. All reimbursement requests must be received between the 10th and the 25th of the month. For large projects where project related costs and individual monthly reimbursement requests will exceed \$1,000,000, a cash flow projection schedule should be provided to Accounts Receivable Section prior to the start of the project. This schedule is necessary for the monitoring of ADOT's cash flow and the facilitation of the federal-aid reimbursement process with FHWA.

527 Change Orders for Design, R/W and Utility Costs and Modified Project Agreement Requests

If the MPO or COG policy provides for federal-aid participation in the cost of change orders and when project costs exceed the amount of federal-aid described in the project agreement, a request for a modified project agreement can be made. ADOT will modify the project agreement in accordance with MPO or COG policy regarding federal-aid participation of change orders costs.

530 CONSTRUCTION PROJECTS

All requests for authorization of federal-aid funds for construction are submitted by the local agency to ADOT Local Government Section. Environmental clearance, utility clearance and R/W clearance certification dates must be provided in the request as well as a statement that design exceptions (have/have not) been (requested/approved) for the project. Also include a cost breakdown showing the estimate for the project detailing the estimate for construction engineering cost, the federal-aid pro-rata share, and the local matching funds share of the project cost. An ADOT PS&E Review Sheet Package of completed forms should be included with the authorization request. ADOT will request authorization of federal-aid funds on the local agency's behalf and will transmit a copy of FHWA authorization to the local agency. FHWA authorization is required prior to construction project advertisement for bid. Costs incurred prior to FHWA authorization are not eligible for federal-aid reimbursement. After the project bids have been opened, certified and the project awarded, a copy of the executed contract with the contractor and an agreement estimate prepared in accordance with ADOT's format shall be submitted to ADOT. ADOT will execute a project agreement with FHWA on the local jurisdiction's behalf. A copy of the project agreement will be transmitted to the local jurisdiction. ADOT Construction Operations Section may be contacted regarding change orders and questions on the eligibility of change orders for federal-aid reimbursement of costs.

531 Reimbursement of Contractor Payments

All requests for reimbursement of contractor payments and other eligible federal-aid project costs are submitted to ADOT Accounts Receivable Section, Administrative Services Division. All requests should be prepared using ADOT payment forms and may be made once monthly. All reimbursement requests must be received between the 10th and the 25th of the month. For large projects where monthly contractor payments, or other project related costs, and individual monthly reimbursement requests will exceed \$1,000,000, a cash flow projection schedule should be provided to Accounts Receivable Section prior to the start of the project. This schedule is necessary for the monitoring of ADOT's cash flow and the facilitation of the federal-aid reimbursement process with FHWA.

532 Modified Project Agreement Requests

If the MPO or COG policy provides for federal-aid participation in the cost of change orders and when project costs exceed the amount of federal-aid described in the project agreement, a request for a modified project agreement shall be made to ADOT Project

Funding Section. ADOT will modify the project agreement in accordance with MPO or COG policy regarding federal-aid participation of change orders costs.

533 Project Acceptance

ADOT Construction Operations Section should be contacted to request participation in the final acceptance of all federal-aid projects. FHWA may choose to participate in the final acceptance review process. The final letter of acceptance and project information for the final voucher of project costs shall be submitted to ADOT Local Government Section.

534 Final Voucher Process, Records Retention, and Project Audit

All federal-aid projects require that a Final Voucher be prepared of project costs prior to closing out the project. The local agency will submit to ADOT Local Government Section within four (4) months after project completion and acceptance, a Final Voucher package which includes the final contractor payment, a statement by the Engineer certifying that all the work has been completed and is acceptable, and an invoice detailing total funds spent and the Federal-aid portion of total funds spent. All project documentation must be retained for five (5) years after the project final voucher has been completed. Once the final voucher is processed for the project, the project is closed and no federal-aid reimbursement of project costs can be made.

535 As—Built Plans

As-built plans of the completed project should be prepared within four (4) months of the final acceptance of the project. Costs for as-building the project are eligible for federal-aid participation, should be included as part of the construction engineering cost for the project and should be included in the final voucher cost package that is submitted to ADOT.

540 CERTIFICATION ACCEPTANCE PROCESS REVIEW

ADOT is required to conduct a review of local agency approved federal-aid project procedures and documentation at least once every four years. More frequent reviews may be conducted during the early stages of local agency Certification Acceptance to ensure that federal-aid procedures are being followed and documented. Members of ADOT's Local Government Certification Acceptance Committee will conduct the process review. ADOT will provide at least one month notice prior to the conduct of the project review. FHWA may choose to participate in the process review.

550 LOCAL GOVERNMENT LIAISON

Each local agency with certification acceptance eligibility shall designate a local government liaison who will be responsible for the agency's procedures and policies as they relate to certification acceptance. Specific responsibilities of the liaison include:

- Coordinate with internal Group and Section Project Managers and Financial Managers for all federal-aid projects that will be submitted to ADOT for processing.
- Coordinate with MPO or COG to ensure that the project has been programmed in the Transportation Improvement Program (TIP) and included in the State Transportation Improvement Program (STIP) submitted to FHWA for approval.
- Submit requests to ADOT Local Government Section for federal and ADOT TRACS numbers for projects. Information submitted to include the Federal fiscal year the project is programmed and the type and amount of Federal funds programmed for the project. State whether Federal funds are to be used for design, Right-of-Way acquisition, utility relocation, and construction. Provide an estimated budget amount for each phase. State when the project is expected to be advertised for bid.
- Submit the initial design concept report and environmental determination report to the ADOT Local Government Section. ADOT Environmental Planning Group will communicate directly with the sponsor project manager on what type of environmental analysis is required to obtain environmental clearance.
- Coordinate with the ADOT Environmental Planning Group on the resolution of comments to obtain environmental clearance for the project. Ensure that project is advertised for bid within 3 years of the environmental clearance approval date. Projects scheduled to advertise 3 years after the environmental clearance date will need to have their initial environmental document reviewed and approved by the ADOT Environmental Planning Group again for a new or revised environmental clearance date prior to bid advertisement.
- Coordinate with the project manager in the ADOT Local Government Section on the documents to be submitted prior to the project advertising for bid. A copy of the detailed estimate is submitted to ADOT's Civil Rights Department to obtain the DBE percentage goal for the project. Documents submitted to ADOT project manager are:
 - a. Cover letter documenting the dates for environmental clearance, R/W clearance, and utility clearance. A statement that design exceptions were or were not approved for the project. Estimated project cost including construction engineering costs. Estimate the amount of federal funds at the federal pro-rata share of federal participation and the local share of matching funds.
 - b. A Federal Highway Administration (FHWA) PS&E Review sheet.
 - c. A financial Recap sheet in FHWA format.
 - d. A project location map (letter size).

The ADOT project manager will request the authorization of federal funds on behalf of the project sponsor. A letter will be sent to the project sponsor documenting the authorization date and the notice to proceed to incur project costs.

- After the project bids are opened, a copy of the low bid should be submitted to ADOT's Civil Rights Department to ensure that the contractor meets the federal DBE requirements for the project. The project is then awarded.
- Submit to the ADOT project manager a project agreement estimate in FHWA format and a copy of the contract with the contractor.
- Communicate with the project manager on project progress during construction. Submit a project closeout document stating that the project has been completed and accepted by the City/County.
- Submit progress payment requests on the ADOT invoice form on a monthly basis or at the end of the project to the ADOT Accounts Receivable Section. Ensure that the construction engineering costs are included in addition to the contractor payments.

Coordination with ADOT and following the described steps will ensure that all federal-aid projects will be completed efficiently and in accordance with all FHWA procedures. Contact the Local Government Engineer at (602) 712-8107 to obtain copies of any FHWA or ADOT forms required for submittal.

560 LOCAL GOVERNMENT CERTIFICATION ACCEPTANCE LIAISONS

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600 LOCAL GOVERNMENT HURF EXCHANGE PROJECTS

This guide has been developed by the Arizona Department of Transportation to assist Metropolitan Planning Organizations (MPO), Council of Government Organizations (COG), and local agencies with planning, project development, and receiving of HURF exchange funds for local government projects. The HURF exchange program, in accordance with Arizona Revised Statute 28-6993.G, allows a local agency to exchange their Federal funds programmed in the appropriate TIP for state HURF funds at a 90% exchange rate.

Local agencies assume all responsibility for project design, environmental clearance, advertisement, award, and construction administration. The MPO/COG should be involved during the programming and project review phases. ADOT's minimal involvement is to insure the project qualifies for funding, establish an Intergovernmental Agreement (IGA) with the project sponsor, and reimburse funds to the local agency.

610 PLANNING AND PROGRAMMING

MPOs and COGs develop a multi-year transportation improvement program (TIP) in cooperation with the regional transportation Technical Advisory Committee (TAC) and Executive Board or Administration Committees with approval by the Regional Council in consultation with the ADOT Transportation Planning Division.

HURF exchange projects selected for inclusion in the TIP are transportation capital improvement projects such as reconstruction, new construction, widening, and resurfacing. Maintenance type activities such as chip seals do not qualify for the HURF exchange program.

During development of updates of the TIP and regional system plans, a review of the current FHWA functional classification system is conducted. Federal functional classification definitions are used in the development of the regional system plan to identify routes for federal-aid eligibility. Using the definitions established in the regional transportation policy plan, additional routes known as area roads of local importance are identified and evaluated with ADOT for federal-aid eligibility.

Maps are prepared which identify all off-state system federal-aid eligible routes with technical assistance of ADOT. The system plan is developed in coordination by the regional TAC, with approval by ADOT and the Regional Council or Executive Board.

620 PROJECT DEVELOPMENT

A project sponsor or MPO/COG requesting to exchange federal-aid apportionment for HURF funds on an eligible project programmed in the TIP must submit a scoping letter to the ADOT Local Government Engineer describing the project scope, the estimated bid advertisement date, the amount of federal apportionment or obligation authority (OA) programmed in the TIP, and the amount of HURF funds expected to be exchanged with ADOT for federal funds.



Subsequent to funding being verified, the ADOT Local Government Section will request a project number and initiate an Intergovernmental Agreement (IGA) based on the federal funds or OA described in the scoping letter and verified by the MPO/COG TIP.

Project sponsors are responsible for the design and development of plans, specifications, and a bid package in accordance with Regional Plan and local policies and procedures. A final set of construction plans and bid package must be placed on file with the ADOT Local Government Section and MPO/COG prior to advertisement. The Local Government Section will review the final plans prior to advertisement to verify that the work and location meet the requirements for HURF exchange. This is not a technical review, the project sponsor is responsible for completeness and accuracy of the construction plans and special provisions. In addition, ADOT is not involved in the construction administration of the project. The sponsor is responsible for all inspection, quality control, and quality assurance during the design and construction phases.

Eligible project construction work may not be performed by local jurisdiction work forces unless the local jurisdiction has submitted the lowest bid on the work, the work qualifies and satisfies force account requirements, and as approved by state statute.

The project sponsor must submit to the Local Government project manager, the name of the contractor, bid award amount, the start date, and the expected finish date for work by the contractor. If the bid award amount for the project comes in UNDER the bid estimate and additional eligible work is change ordered, a letter should be submitted immediately to the Local Government project manager describing any proposed change order work for the project. Change order work for the project may be included in the project cost as long as the work is constructed on the original route that is eligible for federal-aid funds and the work activity is eligible for federal funds participation. Change order requests should be submitted to ADOT prior to the contractor starting work on the project. The Local Government project manager will transmit a letter to the project sponsor approving the change order work to be included in the total project cost. All administrative activities shall be conducted in an expedient manner.

630 FUNDING AND REIMBURSEMENT

The exchange of HURF funds for eligible federal funds became effective on October 1, 1997, the start of federal fiscal year 1998. The total amount of HURF funds exchanged shall not exceed 90% of the OA available to the MPOs and COGs, excluding the local off-state system Bridge, Safety, and Enhancement Programs.

Project funding is carried out through an IGA between the project sponsor and ADOT. Federal-aid of an eligible project may be exchanged with HURF equal to 90% of the O.A. available at the time the project advertises for bid. The IGA will describe the HURF funds to be exchanged according to 90% of the prevailing OA at the time the IGA is prepared. If the OA percentage factor changes prior to advertisement, the IGA will be amended accordingly. The IGA can be amended only once after the bids are opened and the project

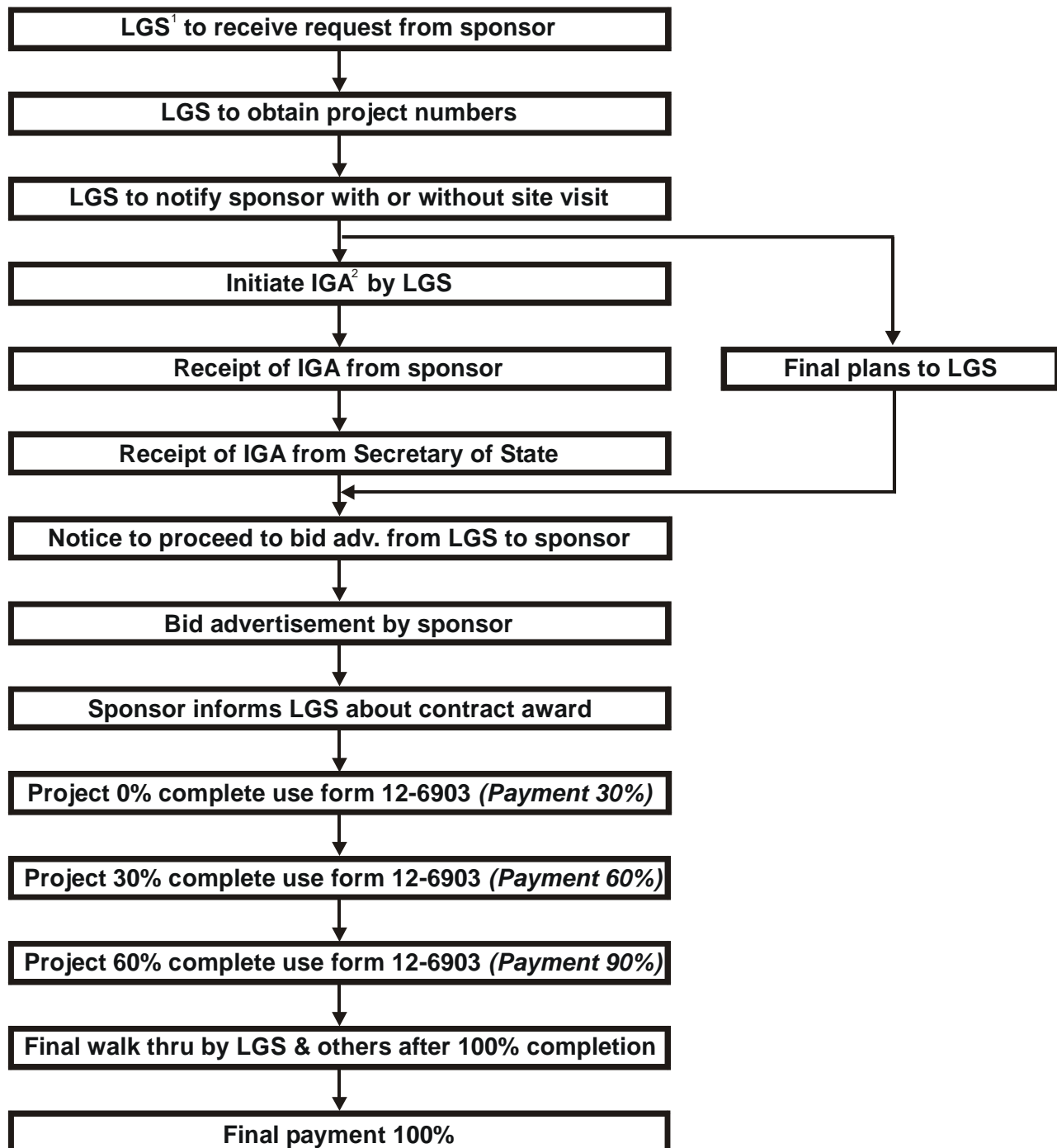


is awarded. An amendment will facilitate any increase of federal funds provided by the MPO/COG for the project should bids be in excess of the estimate.

At the start of construction, the project sponsor will receive a 30% lump sum advance of the total HURF amount described in the IGA. Subsequent payments in 30% increments are paid at the 30% and 60% project completion stages. The sponsor is responsible for requesting payments at the 30% and 60% completion stages using an ADOT-prescribed format.

The final 10% is payable after a final project review is conducted. Upon project completion, the sponsor, MPO/COG representative, and ADOT representative(s) from the Local Government Section and/or Construction District will visit the project site to conduct the final project review in an expedient manner. Final project review by the MPO/COG and ADOT is only procedural, not technical in nature, and certifies completeness of the activities identified in the scope of the project. When the project work is accepted as complete and consistent with the scope of work described in the scoping letter and identified in the regional TIP, then ADOT will approve and process the final ten percent (10%) payment to the project sponsor.

HURF Exchange Project Development Process



¹ LGS -- Local Government Section of ADOT

² IGA -- Intergovernmental Agreement



Checklist for Processing HURF Exchange Funded Projects

| Completed by | Date | Item | |
|--------------|------|--|-------------------------------|
| | | Receipt of request letter from project sponsor or MPO/COG to exchange federal aid eligibility for HURF of an eligible project programmed in the TIP. | |
| | | Project sponsor to meet with ADOT's Local Government Section to discuss HURF Exchange Program requirements. | |
| | | LGS to verify project is an eligible project programmed in the TIP. | |
| | | ADOT's Local Programs Team to verify programming of federal funds. | |
| | | LGS will notify project sponsor, request TRACS and project numbers, process HURF Intergovernmental Agreement Checklist and initiate the Intergovernmental Agreement (IGA). | |
| | | Notify Debbie Garrett with request letter and TRACS Number. | |
| | | LGS to review draft IGA. | |
| | | LGS to forward copy of executed contract to MPO/COG and to ADOT's Local Programs Team. | |
| | | LGS to receive a final set of half-size construction plans and bid package from project sponsor prior to advertisement. | |
| | | LGS to review final plans prior to advertisement to verify that the scope of work and location meet the requirements for HURF Exchange. This is not a technical review. | |
| | | Project Completion (%) | Cumulative Payment (%) |
| | | 0 | 30 |
| | | 30 | 60 |
| | | 60 | 90 |
| | | 100 | 100 |
| | | Upon project completion, ADOT LGS or Construction District representative will visit project site, along with project sponsor or MPO/COG, to conduct final project review (review is procedural, not technical). | |
| | | When project is complete and consistent with scope identified in the regional TIP, then LGS will approve the final 10% payment to the project sponsor. | |



APPENDIX A DIRECTORY OF ADOT/FHWA CONTACT STAFF

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Utilities and railroads clearances



APPENDIX B

GUIDELINES FOR THE PREPARATION OF A DESIGN CONCEPT REPORT

The following information is provided for guidance in the preparation of a Design Concept Report (DCR). The basic format is standard; however, the specifics and required information vary according to the type of project. The report should reflect the following major sections and be assembled in some type of binder.

A. TITLE PAGE

The title page should contain the following information:

- ◆ Highway or street name and number.
- ◆ Federal and TRACS project numbers.
- ◆ Project location (The beginning point and ending point of the project.).
- ◆ Sponsor of project (City or County).
- ◆ Author of Design Concept Report.
- ◆ Date.

B. INTRODUCTION

The introduction contains the project program information. State the fiscal year in which the project is programmed, the MPO/COG project number if available, and the type and amount of Federal funds programmed. Also provide the county or city the project is located in, the project route name including termini and functional classification, estimated cost, construction Federal fiscal year, and expected project development start and completion dates.

C. BACKGROUND DATA

This section addresses the year of construction, previous up-grade projects, existing typical section, general features such as structures, major drainage, major traffic control items, railroad crossings, major utilities, and accident history. This section should address the comparison of the design speed of the existing vertical and horizontal alignment to the current standards. Provide current and future traffic data, and K (Peak Hour/Urban Projects), D (Directional Distribution), and T (% Heavy Trucks) factors.

D. PROJECT SCOPE

Describe the project limits and the recommended project scope, such as grade and drain, surfacing, overlay, widening, bridge replacement or rehabilitation, etc.

E. PROJECT DEVELOPMENT CONSIDERATIONS

1. Environmental requirements as determined by the project scope
 - a. Potential Hazardous Waste sites

- b. 404 Permit requirements
 - c. Section 4(f) lands
 - d. Flood plain encroachment
 - e. Wetlands
 - f. Scenic or historic route
 - g. Noise mitigation
 - h. Archaeological impacts, mitigation measures
 - i. Biological, cultural, and social or economic impacts.
2. Critical Outside Agency Involvement
Describe any project locations that are likely to involve lengthy clearance procedures (Forest Service, BLM, Indian reservations, railroads, irrigation companies, major utilities)
3. Right-of-Way Requirements
Describe the general corridor right-of-way. Describe the general land ownership (Private, Forest Service, Bureau of Land Management BLM, etc.). Describe any R/W that will have to be acquired and how the R/W is expected to be acquired for the project (donation, purchase, or condemnation).
4. Utility Relocation Requirements
Describe any utility impacts, and how the relocation of the utilities is expected to be accomplished (work done by the utility company, bid item in the construction project). How is the work to be financed (local funds fed-aid funds)? Are there any "Prior Rights" issues for any utilities?
5. Seasonal Considerations
Is there any field survey work to be accomplished. Is there any mapping, field data collection or testing required? Describe the limits of the construction season.
6. Traffic Requirements
Is there a need for traffic control plans for this project? Will pavement markings and signing be included in the project? Will there be new traffic signals installed as part of the project?
7. Design Alternatives
Provide three design alternatives including the selected proposed scope of work. A full discussion of alternates is required. Any number of major alternates maybe significant depending upon the nature of a project. Drainage being one of the most obvious. Each design alternative should be given sufficient study to ensure that it is feasible. If an alternate paving section will be proposed this should be noted. Also identify any issues or specific design alternates that the DCR should address and evaluate.
8. Design Criteria



- ◆ Describe the design criteria to be used. Is the design criteria in concert with AASHTO, MAG, or PAG criteria?
- ◆ Features which do not comply with AASHTO criteria are described along with recommendations for either meeting the criteria or requesting a design exception. Design exceptions are approved by the appropriate ADOT Technical Section Manager.

F. SOCIAL, ECONOMIC, AND ENVIRONMENTAL CONSIDERATIONS

At the very minimum, the impacts associated with the following should be addressed:

1. Regional and community growth including general plans and proposed land use, total transportation requirements, and the status of the planning process.
2. Overview of potential hazardous waste sites, Section 401 & 404 Clean Water Act permits, flood plains, wetlands, historic and archaeological conservation and preservation, soil erosion and sedimentation, the general ecology of the area as well as man-made and other natural resources, such as parks and recreational facilities, wildlife and waterfowl areas, historic and natural landmarks.
3. Public facilities and services including religious, health and educational facilities, and public utilities, fire protection and other emergency services.
4. Community cohesion including residential and neighborhood character and stability, highway impacts on minority and other specific groups and interests, and effects on local tax base and property values.
5. Displacement of people, businesses, and farms including relocation assistance, availability of adequate replacement housing, economic activity (employment gains and losses, etc.)
6. Air, noise, and water pollution including consistency with approved air quality implementation plans, Federal Highway Administration noise level standards, and any relevant Federal or State water quality standards.
7. Aesthetic, and other values including visual quality, such as "view of the road" and "view from the road", and the joint development and multiple use of the space.

E. OTHER REQUIREMENTS

Describe the funding sources for the project. State the desired bid advertisement date. The construction start date will be 2 ½ months after the project has initially advertised for bid. Describe how the project will be developed (designed in-house, will hire a consultant firm). Will ADOT perform construction administration or will a request be made to approve the local jurisdiction to perform construction administration?

H. ESTIMATED COST

Describe the project cost by category:

- a. Design Cost to be funded with local funds or reimbursed with federal funds.
- b. Right-of-Way cost to be funded with local funds or reimbursed with federal funds.
- c. Utility relocation cost to be funded with local funds or reimbursed with federal funds.
- d. Construction cost (partial local funds or all to be reimbursed with federal funds).
- e. Total cost.

I. ITEMIZED ESTIMATE

Provide an itemized project cost estimate. If the construction is administered by ADOT, include 15% construction engineering and 5% contingency costs.

J. VICINITY MAP

Provide project location and vicinity maps.

K. TYPICAL SECTION SKETCH

Provide a typical section for the project including R/W limits and proposed pavement structural section, slopes, and lane and shoulder dimensions.

APPENDIX C

LOCAL GOVERNMENT PROJECT ENVIRONMENTAL PROCESS

1. *Initial Design Concept Report or Initial Project Assessment.*

- Circulated by ADOT project manager to NEPA planner.
Reviewed to determine level of Environmental Determination (ED).
Comments are summarized into instructions letter.
Guidelines and instructions mailed to community.
- Historic Districts or other cultural resources (usually TEA projects):
Three (3) additional copies of DCR or PA are required.
ADOT Environmental and Enhancement Group (EEG) Historic Preservation Team initiates consultation.
Recommendations are forwarded to the community.

2. *Community completes public and agency scoping.*

- Public scoping.
Adjacent land owners and community groups.
4(f) properties in project area (parks, public school playgrounds, historic districts, etc.).
Detour route, if applicable.
- Agency scoping.
Federal and State agencies (USCOE, USFWS, AGFD, etc.).
Other adjacent communities (Tribes, Flood Control District, etc.).
Other offices/divisions within community (Parks, Utilities, Historic Preservation, etc.).

3. *Submittal of Technical Reports.*

- Biology – biological review or biological evaluation.
Determination of affect approved by ADOT/FHWA.
- Invasive Weeds Survey.
Approved by ADOT/FHWA.
Additional survey or mitigation depending on growing season.
- Hazardous Materials.
Preliminary initial site assessment or Phase I.
Approved by ADOT/FHWA.
- Cultural Resources.
Recommendation of “No Historic Properties Affected.”
Approved by ADOT/FHWA.
Records search/cultural resources survey.
Submitted with three (3) copies of cultural survey and three (3) copies of the final DCR or PA approved by ADOT.
Approved by ADOT/FHWA and receives SHPO concurrence.
- Other project specific technical reports.
Noise Study and Air Quality Study

4. Draft Environmental Determination (ED).

- Written according to current guidelines.
- Reviewed, read, and signed by community (project manager).
- Includes all attachments-
 - State map and location map (pages 2 and 3, respectively).
 - Agency consultation response letters.
 - Public scoping response letters.
 - Other applicable attachments (404 permits, detour maps, public meeting notices, etc.)
- ADOT Review-
 - By NEPA planner and circulated to EEG for complete edits (if a complete draft is submitted).
 - Comments and further instruction returned to community and consultant, if community directs.
 - If draft is not complete, second draft will be circulated, not first draft.

5. Second/Final Environmental Determination

- ADOT review.
 - Verifies all edits were addressed.
 - Sends for final review by EEG.
 - Requests required number of copies from community and the electronic copy of the ADOT memo.
 - Obtains approval and circulates.

**APPENDIX D****PROJECT STATUS AND DOCUMENT CHECKLIST****FEDERAL PROCESS**

PROJECT NO.: _____ TRACS NO.: _____
 PROJECT NAME: _____ TERMINI: _____
 LOCAL AGENCY: _____ DISTRICT: _____ FY: _____ Length: _____
 LOCAL AGENCY CONTACT: _____ PHONE: _____

_____ Project Request received from Local Agency
 _____ Project Scoping Meeting (Kick-off)/Field Review with Local Agency
 _____ Route Classification and Eligibility from TPD
 _____ TRACS and Project No. request form Submitted. Returned _____
 _____ Safety Project Eligibility Request Rec'd (Traffic/Accident Study). FHWA Approval _____

If Federal Funds for Design:

_____ Design Consultant Selection Process submitted by Local Agency to ECS (Carrie Satterlee)
 _____ Consultant Selection Process approved by ECS. Approval to Local Agency _____
 _____ Signed contract between Local Agency and Consultant received
 _____ Federal Obligation (1240). Approved _____. Notice to Proceed to Local Agency _____
 _____ Initial DCR Received. Distributed in ADOT _____. Comments to Local _____
 _____ Project Determination Form to Environmental Planner (Alisa) with 4 copies of DCR
 _____ Project Development Schedule from Local Agency
 _____ Final DCR Received. Approval Letter sent to Local Agency _____
 _____ Environmental Clearance from EP (Alisa). Can not proceed past 30% without environ. clearance.
 _____ Right of Way Clearance Letter
 _____ Utilities Clearance Letter
 _____ IGA request to ECS. IGA executed _____
 _____ Receive Local Agency Matching Funds

| | 30% (Stage II) | | 60% (Stage III) | | 95% (Stage IV) | |
|-----------------------------|----------------|-------|-----------------|-------|----------------|-------|
| | REC | RET | REC | RET | REC | RET |
| PLANS | _____ | _____ | _____ | _____ | _____ | _____ |
| SPECIFICATIONS | _____ | _____ | _____ | _____ | _____ | _____ |
| ESTIMATE | _____ | _____ | _____ | _____ | _____ | _____ |
| SPECIAL PROVISIONS | _____ | _____ | _____ | _____ | _____ | _____ |
| GEOTECHNICAL REPORT | _____ | _____ | _____ | _____ | _____ | _____ |
| MATERIALS DESIGN MEMO | _____ | _____ | _____ | _____ | _____ | _____ |
| STRUCTURAL SELECTION REPORT | _____ | _____ | _____ | _____ | _____ | _____ |
| STRUCTURAL CALCULATIONS | _____ | _____ | _____ | _____ | _____ | _____ |
| DRAINAGE REPORT | _____ | _____ | _____ | _____ | _____ | _____ |
| DRAINAGE CALCULATIONS | _____ | _____ | _____ | _____ | _____ | _____ |
| EARTHWORK CALCULATIONS | _____ | _____ | _____ | _____ | _____ | _____ |

_____ PS&E Approval Letter from C&S to Local Agency. From Local Agency to C&S _____
 _____ Federal Obligation requested (1240). Approved _____. Local Agency notified _____
 _____ Field Review _____. Office Review _____. FACE Sheet to Local Agency _____
 _____ Original Plans and Specs received from Local Agency. Cross Sections received _____
 _____ Control Desk Submittal
 _____ Bid Advertisement. Bid Opening _____. Bid Award _____. Notice to Proceed _____



COMMENTS

Projectchecklist.doc

Appendix E

DOCUMENTS REQUIRED FOR DESIGN PHASE SUBMITTALS

| CONTRACT DOCUMENT ITEM | STAGE I | STAGE II | STAGE III | STAGE IV | FINAL PS&E |
|---|------------|-------------|--------------|-------------|---------------|
| Face Sheet | | P | F | F | S |
| List of Standard Drawings | | | P | F | S |
| Design Sheet & Index | | | P | F | S |
| Summary Sheets | | | P | F | S |
| Special Detail Drawings | | | P | F | S |
| Typical Roadway Sections | I | P | F | F | S |
| Geometric Control Sheets | | P | F | F | S |
| Existing Conditions & Removal | | P | F | F | S |
| Removal Summary | | P | F | F | S |
| Roadway Plan & Profile Sheets | P | F | F | F | S |
| Detour Sheets | | P | F | F | S |
| Parking Area Plans & Details | | P | F | F | S |
| Staking Plans | | P | F | F | S |
| Fencing Plans | | P | F | F | S |
| Drainage Plans & Details | | P | F | F | S |
| Intersection Plans & Details | | I | P | F | S |
| Interchange Plans & Details | | P | F | F | S |
| Major Structural Plans, Details | | I | P | F | S |
| Traffic Signal Plans, Details | | I | P | F | S |
| Traffic Control Plans, Details | | I | P | F | S |
| Sequence of Construction | | I | P | F | S |
| Traffic Control Duration & Quantities | | I | P | F | S |
| Signing & Pavement Marking Plans & Qty. | | | P | F | S |
| Lighting Plans & Details | | | P | F | S |
| Landscape Plans & Details | | | P | F | S |
| Utility Relocation Plans, Details | | | P | F | S |

| CONTRACT DOCUMENT ITEM | STAGE I | STAGE II | STAGE III | STAGE IV | FINAL PS&E |
|--|------------|-------------|--------------|-------------|---------------|
| Utility Prior Rights Documentation | | | F | | |
| Utility Specifications | | | I | P | F |
| Utility Report | | I | P | F | |
| Utility Special Provisions | | | I | P | F |
| Utility Clearance Letter | | | | P | F* |
| Utility Service Agreements | | | | P | F |
| Stormwater Pollution Prevention Control Plan | | | P | F | S |
| Top Soil Plating Sheets | | | P | F | S |
| Special Drawings & Details | | | P | F | S |
| Roadway Cross Sections | | P | F | F | F |
| Quantities & Combined Cost Estimate | | P | P | F | F |
| Special Provisions | | | P | F | S |
| Construction Schedule | | | P | F | S |
| DBE Participation Goals | | | | P | F |
| Bidding Schedule | | | P | F | F |
| Final Design Calculations | | | | F | S |
| Bound Survey Books | F | S | | | |
| Right-of-Way Requirements | | P | F | | |
| Drainage Report -Roadway | | P | F | S | |
| Drainage Report -Structure | | S | | | |
| Traffic Analysis Report | | S | | | |
| Bridge Foundation Report | | S | | | |
| Structure Selection Report | | S | | | |
| Pavement Design Summary | | S | | | |
| Geotechnical Report | | S | | | |
| Environmental Permits | | P | F | | |
| Environmental Mitigation Measures | I | P | F | | |
| Materials Design Memo | | P | S | | |

| CONTRACT DOCUMENT ITEM | STAGE I | STAGE II | STAGE III | STAGE IV | FINAL PS&E |
|--|------------|-------------|--------------|-------------|---------------|
| Arizona State Plane Coordinates | | S | F | F | S |
| CADD Files (graphic, ascii, dtm, & etc.) | | P | F | F | S |

LEGEND:

- * To be sent prior to final submittal
- I denotes initial concepts
- P denotes preliminary, unchecked, excluding minor details
- F denotes final, checked, all details and quantities
- S denotes sealed in accordance with technical registration requirements